

<p align="center">Notice of Allowability</p>	Application No.	Applicant(s)	
	09/490,173	CARRICO ET AL.	
	Examiner Fred Ferris	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 19 October 2004.
2. ☒ The allowed claim(s) is/are 1,2,4,5,7 and 8, now renumbered as 1-6.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 03102005.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date <u>10/19/04</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
 of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
 Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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DETAILED ACTION

1. *A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 October 2005 has been entered. Applicants have cancelled claims 3, 6, and 9. Claims 1, 2, 4, 5, 7, and 8 have now been allowed over the prior art of record.*

Response to Arguments

2. *Applicant's arguments filed 19 October 2004 have been fully considered and found to be persuasive.*

Regarding applicant's response to 37 CFR 1.105 request: *The examiner has reviewed applicant's documentation submitted in response to the examiner's Request for Information under 37 CFR 1.105 as noted on IDS dated 19 October 2004. The submitted documentation is sufficient to satisfy the 37 CFR 1.105 requirements and has now been made of record.*

Regarding applicant's response to 112(1) rejection: *The examiner withdraws the 112(1) rejection in view of applicant's amendment to the claims and arguments filed 19 October 2004.*

Regarding applicant's response to 102(b/e) rejections: The examiner withdraws the 102(b/e) rejections in view of applicant's amendment to the claims and arguments filed 19 October 2004.

Drawings

3. Applicant's new drawings of figures 5-9 submitted on 13 February 2004 have been approved by the examiner. However, figures 1-4 were submitted as informal drawings and acceptable for examination purposes only. Now that claims have been allowed, new formal drawings are required in response to this office action.

Allowable Subject Matter

4. Claims 1, 2, 4, 5, 7, and 8 have been allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

Applicants are disclosing a method, computer system, and program product for orbital mission planning that allows automated iterative calculations of orbital parameters. These features are generally disclosed in the prior art of record. However, the prior art of record, while disclosing these features does not meet the conditions as suggested in MPEP section 2132, namely:

"The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this

is not an ipsissimis verbis test, i.e., identity of terminology is not required. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

In particular, the prior art of record does not explicitly disclose the specific sequence of steps inclusive of establishing profiles for each particular sub-problem by specifying the control variables and results to be varied for each sub-problem of the present invention, in the context of the claims. The disclosed invention is an improved enhancement over the Swingby/Astrogator manual input mission analysis design tools.

The closest prior art uncovered during examination does not disclose the specific sequence of steps or arrangement of elements as cited above, but discloses certain elements of the claimed invention as follows:

U.S. Patent 6,048,366 issued to Ellis et al: Teaches a satellite simulator used for mission rehearsals (planning), development and testing (analysis), and anomaly isolation but does not explicitly disclose the method steps of establishing profiles for each particular sub-problem by specifying the control variables and results to be varied for each sub-problem of the present invention.

"MARC – A System for Simulation and Visualization of Space Mission Scenarios", T. Stephenson, pp. 14-19, IEEE AES Magazine, June 1989: Teaches modeling the orbital dynamics of spacecraft and generating a simulated sequence of orbital maneuvers including spacecraft thrust and modeling of celestial objects, but again, does not explicitly disclose the method steps of of establishing profiles for each particular sub-problem by specifying the control variables and results to be varied for each sub-problem of the present invention.

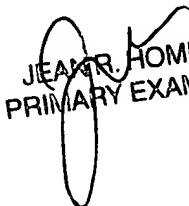
Dependent claim 2, 5, and 8 are allowable as being dependent from independent claim 1, 4, and 7 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached at 571-272-3780. The Official Fax Number is: (703) 872-9306*

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JEAN R. HOMERE
PRIMARY EXAMINER